

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-29. (Cancelled)

Claim 30. (Currently Amended) A method, comprising:

receiving, at a neighborhood headend located in a neighborhood, a first input signal from a cable distribution center and a second input signal from a satellite cable antenna;

multiplexing, by the neighborhood headend, one or more of a plurality of video channels received in the first input signal from the cable distribution center and the second input signal from the satellite cable antenna;

receiving, at a local service module located in the neighborhood and coupled to the neighborhood headend, the one or more multiplexed channel signals from the neighborhood headend;

receiving, at the local service module, a channel selection request from one of a plurality of room interface units for one of the plurality of video channels, the one of the plurality of room interface units to transmit the channel selection request upstream via cabling coupled to the local service module;

converting to a predetermined frequency, by one of a plurality of programmable frequency converters in the local service module, the one of the plurality of video channels corresponding to the channel selection request;

~~filtering, by a bandpass filter, a downstream DOCSIS channel signal;~~

combining by the local service module, the converted one of the plurality of video channels with at least one other video channel from the one or more multiplexed channel signals and ~~the a~~ filtered downstream DOCSIS channel signal into a multiplexed signal to be received by an output diplexer in the local service module for transmission to the plurality of

room interface units, each of the plurality of room interface units being located at a customer location of the neighborhood; and

receiving by a DOCSIS return channel frequency converter in the local service module, an upstream DOCSIS return signal from the output diplexer, the DOCSIS return channel frequency converter configured to provide a frequency-selectable return signal to an input diplexer of the local service module for return to the neighborhood headend.

Claim 31. (Previously Presented) The method of claim 30 wherein the predetermined frequency is a first predetermined frequency and further comprising:

converting, to a second predetermined frequency using another one of the plurality of converters, the at least one other video channel from the one or more multiplexed channel signals.

Claim 32. (Previously Presented) The method of claim 30 wherein the video channels of the multiplexed signal are provided to and filtered by a video displaying apparatus coupled to an interface unit located at a customer location.

Claim 33. (Currently Amended) The method of claim 30 ~~wherein the one of the plurality of converters is a programmable frequency converter, further comprising prior to converting to the predetermined frequency the one of the plurality of video channels, receiving the multiplexed channel signal from a power divider in the local service module, the power divider configured to divide the multiplexed channel signal into a plurality of identical multiplexed channel signals.~~

Claim 34. (Previously Presented) The method of claim 30 ~~wherein the channel selection request identifies a customer each of the plurality of programmable frequency converters is controllable by a microprocessor, the programmable frequency converter configured to directly convert without demodulation and remodulation of a signal, a video channel selected by the microprocessor from its frequency in the multiplexed channel signal to a~~

predetermined fixed frequency at a frequency location that is assigned to a particular corresponding room interface unit.

Claim 35. (Previously Presented) The method of claim 30 further comprising:
demultiplexing the one or more multiplexed channel signals at the local service module.

Claim 36. (Previously Presented) The method of claim 30 wherein at least one of the one or more multiplexed channel signals includes one or more video channels received from any one or more, or a combination of, the following components of the neighborhood headend: a personal video recorder, a video on demand server, a personal computer, and a forward channel DOCSIS frequency converter.

Claim 37. (Previously Presented) The method of claim 36 wherein the channel selection request includes at least one command to control one or more of the following: the personal video recorder, the video on demand server, the personal computer, or the DOCSIS frequency converter.

Claim 38. (Previously Presented) The method of claim 30 wherein:
the predetermined frequency is one of a plurality of predetermined frequencies; and
the multiplexed signal is transmitted to a plurality of room interface units, each unit being associated with one of the plurality of predetermined frequencies.

Claim 39. (Cancelled).

Claim 40. (Previously Presented) The method of claim 38 wherein at least one of the plurality of room interface units includes authorization information that authorizes display of the one of the plurality of channels and the method further comprises:

obtaining authorization from the at least one of the plurality of room interface units to convert the one of the plurality of video channels.

Claim 41.-42 (Cancelled).

Claim 43. (Previously Presented) The method of claim 30 wherein another local service module converts a video channel from the plurality of video channels to the predetermined frequency.

Claim 44. (Previously Presented) The method of claim 43 wherein the local service module utilizes frequencies for the plurality of converters in the local service module that are identical to frequencies utilized by a plurality of converters in the another local service module.

Claim 45. (Previously Presented) The method of claim 30 wherein the channel selection request includes a DOCSIS return channel signal for transmission to the neighborhood headend.

Claim 46. (Currently Amended) A local service module for use in a neighborhood, comprising:

a microprocessor adapted to receive a channel selection request from one of a plurality of room interface units, the one of the plurality of room interface units configured to transmit the channel selection request upstream to the local service module via cabling coupled to the local service module, the channel selection request being for one of a plurality of video channels received in a multiplexed channel signal from a neighborhood headend of the neighborhood, the neighborhood headend configured to be receptive of a first input signal from a cable television distribution center and a second input signal from a satellite antenna and to transmit the multiplexed channel signal to the local service module;

a plurality of programmable frequency converters adapted to convert to a predetermined frequency, at least one of the plurality of video channels corresponding to the channel selection request;

a ~~bandpass filter for filtering a downstream DOCSIS channel signal;~~

a combiner adapted to combine the converted one of the plurality of video channels with at least one other video channel and ~~the~~ a filtered downstream DOCSIS channel signal into the multiplexed signal, the local service module to transmit the multiplexed signal via an output diplexer to the plurality of room interface units coupled to the local service module, each of the plurality of interface units being located at a customer location located in the neighborhood; and

a DOCSIS return channel frequency converter configured to receive an upstream DOCSIS return signal from the output diplexer and further configured to provide a frequency-selectable return signal to an input diplexer of the local service module for return to the neighborhood headend.

Claim 47. (Previously Presented) The local service module of claim 46 wherein the output diplexer is configured to pass signals having a frequency of lower than 50 MHz to the DOCSIS return channel frequency converter.

Claim 48. (Previously Presented) The local service module of claim 46 wherein the output diplexer is configured to pass signals having a frequency at or above 50 MHz to the plurality of room interface units.

Claim 49. (Previously Presented) The local service module of claim 46 wherein at least one of the plurality of converters is a programmable frequency converter.

Claim 50.- 51. (Cancelled).

Claim 52. (Previously Presented) The local service module of claim 46 wherein the local service module further comprises:

a power divider adapted to divide the multiplexed channel signal into a plurality of identical multiplexed channel signals, one for each of the plurality of converters.

Claim 53. (Currently Amended) A cable distribution system, comprising:

a plurality of local service modules located in a neighborhood to receive one or more multiplexed channel signals comprised of one or more video channels, at least one or more of the multiplexed channel signals received from a neighborhood headend of the neighborhood, the neighborhood headend being configured to be receptive of input signals from each of a cable distribution center and a satellite antenna, each local service module of the plurality of local service modules to convert by a programmable frequency converter one of the one or more video channels in the one or more multiplexed channel signals corresponding to a channel selection request to a predetermined frequency;

~~a bandpass filter to filter a downstream DOCSIS channel signal;~~

a combiner adapted to combine the converted one of the one or more video channels with at least one other video channel of the one of more multiplexed channel signals and the filtered downstream DOCSIS channel signal into a multiplexed signal;

a plurality of room interface units associated with the plurality of local service modules, each of the plurality of room interface units configured to receive the multiplexed signal and filter one of the one or more video channels from the multiplexed signal for a video displaying apparatus at a customer location in the neighborhood, the multiplexed signal received in response to the channel selection request sent upstream from the room interface unit via cabling coupled to the local service module; and

a DOCSIS return channel frequency converter included in a local service module of the plurality of local service modules, the DOCSIS return channel frequency converter configured to receive an upstream DOCSIS return signal from an output diplexer in the local service module and configured to provide a frequency-selectable return signal to an input diplexer of the local service module for return to the neighborhood headend.

Claim 54. (Previously Presented) The cable distribution system of claim 53 wherein the neighborhood headend is further configured to receive signals from a satellite delivery transportation system.

Claim 55. (Cancelled)

Claim 56. (Previously Presented) The cable distribution system of claim 53 further comprising:

a database configured to communicate with a processor configured to communicate with the neighborhood headend and the plurality of local service modules, the database for storing customer viewing preferences.

Claim 57. (Previously Presented) The cable distribution system of claim 53 wherein the neighborhood headend is a headend remote from a cable distribution center headend.

Claim 58. (Previously Presented) A neighborhood headend comprising:

receiver/decoder means for receiving a satellite dish signal from a satellite dish antenna and for decoding and outputting in response, a first signal;

receiver/decoder means for receiving a cable television signal from a cable distribution center and for decoding and outputting in response, a second signal;

video recorder means for receiving at least one of a satellite dish signal from the satellite antenna and a cable television signal from the cable distribution center and for outputting in response, a selected third signal;

combiner means for combining the first, second, and third signals and for outputting a combined signal; and

duplexer means for receiving the combined signal and for outputting in response, a multiplexed channel signal to a local service module co-located in a neighborhood with the neighborhood headend, wherein the local service module includes programmable frequency converter means for converting to a predetermined frequency, at least one of a plurality of video channels in the multiplexed channel signal.

Claim 59. (Previously Presented) The neighborhood headend of claim 58 further comprising personal computer means for receiving an Internet over television signal, the personal computer means also for outputting in response, a fourth signal to be combined with the first, second, and third signals by the combiner means.

Claim 60. (Previously Presented) The neighborhood headend of claim 58 further comprising frequency converter means for receiving an Internet connectivity channel and converting the Internet connectivity channel to a predetermined frequency for passage to the combiner means.

Claim 61. (Previously Presented) The neighborhood headend of claim 58 wherein the receiver/decoder means comprises a block of separate integrated receiver/decoders (IRDs).

Claim 62. (Previously Presented) The neighborhood headend of claim 58 wherein the video recorder means is further for receiving a signal from a broadcast television antenna.

Claim 63. (Previously Presented) The neighborhood headend of claim 58 wherein the receiver/decoder means is further for receiving a satellite dish signal.

Claim 64. (Previously Presented) A local service module for use in a neighborhood, comprising:

a microprocessor adapted to receive a channel selection request from one of a plurality of room interface units, the one of the plurality of room interface units configured to transmit the channel selection request upstream to the local service module via cabling coupled to the local service module, the channel selection request being for one of a plurality of video channels received in a multiplexed channel signal from a neighborhood headend of the neighborhood, the neighborhood headend configured to be receptive of a first input signal from a cable television distribution center and a second input signal from a satellite antenna and to transmit the multiplexed channel signal to the local service module;

a plurality of programmable frequency converters adapted to convert to a predetermined frequency, at least one of the plurality of video channels corresponding to the channel selection request;

a combiner adapted to combine the converted one of the plurality of video channels with at least one other video channel into the multiplexed signal, the local service module to transmit the multiplexed signal via an output diplexer to the plurality of room interface units

coupled to the local service module, each of the plurality of interface units being located at a customer location located in the neighborhood; and

a DOCSIS return channel frequency converter configured to receive an upstream DOCSIS return signal from the output diplexer and further configured to provide a frequency-selectable return signal to an input diplexer of the local service module for return to the neighborhood headend.

Claim 65. (Currently Amended) The local service module of claim ~~46-64~~ wherein the output diplexer is configured to pass signals having a frequency of lower than 50 MHz to the DOCSIS return channel frequency converter.

Claim 66. (Currently Amended) The local service module of claim ~~46-64~~ wherein the output diplexer is configured to pass signals having a frequency at or above 50 MHz to the plurality of room interface units.

Claim 67. (Currently Amended) The local service module of claim ~~46-64~~ wherein the local service module further comprises:

a power divider adapted to divide the multiplexed channel signal into a plurality of identical multiplexed channel signals, one for each of the plurality of programmable frequency converters.